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BODY FAT IN PREPUBERTAL BOYS: DIFFERENT TRAINING PROGRAM'S DESIGNS

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INTRODUCTION

Research studies agreed that strength and aerobic training either combined or performed separately promote bone density, aerobic capacity, and explosive strength improvements in childhood. Nevertheless, there still is uncertainty regarding to the best training program to be implemented that efficiently improve body fat percentage. The current study aimed to compare different training program's designs on body fat percentage in prepubertal boys.

METHODS

One hundred twenty-three boys (10.93 ± 0.57 years) were randomly assigned into five experimental groups to perform different training protocols for 8 weeks: strength-only (SG), aerobic-only (AG), inter-session concurrent aerobic-strength training (ASG_2), intra-session concurrent aerobic-strength training (ASG), intra-session concurrent strength-aerobic training (SAG), and a control group, no training (CG). SG, AG, ASG and SAG groups performed single sessions two days per week. ASG_2 group performed on different days each week (two and two days per week). The strength training program comprised plyometric exercises (medicine ball throws and jumps) and sprint running. The aerobic training program comprised the 20m shuttle run exercise. Body fat percentage was assessed using a body composition analyzer (Tanita TBF-300A) before and after the 8-weeks of the training program.

RESULTS

Body fat percentage showed significant decrements from pre- to the post-training in the ASG_2 (17.6%, p=0.004), SG (16.1%, p=0.000), and SAG (17.7%, p=0.000) groups. There was an impairment in the ASG (4.2%, p=0.492) and control group CG (16.8%, p=0.000). No differences were presented in the AG (p=0.053).

CONCLUSIONS

The order of intra-session concurrent training influenced body fat percentage changes. Moreover, performing intra-session concurrent strength and aerobic training is more useful than strength or aerobic training only and concurrent training in different sessions to decrease body fat percentage in prepubertal boys. These results have a meaningful interest to optimized school-based fat loss exercise programs in childhood.

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